

**TITLE 18. ENVIRONMENTAL QUALITY**  
**CHAPTER 11. DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**WATER QUALITY STANDARDS**

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**R18-11-101. Definitions**

The following terms of apply to this Article have the following meanings:

1. “Acute toxicity” means toxicity involving a stimulus severe enough to induce a rapid response ~~rapidly~~. In aquatic toxicity tests, an effect observed in 96 hours or less is considered acute.
- ~~2.~~ “AgI” means agricultural irrigation.
- ~~3.~~ “AgL” means agricultural livestock watering.
- ~~4.2.~~ “Agricultural irrigation (AgI)” means the use of a surface water for ~~the irrigation of crops~~ crop irrigation.
- ~~5.3.~~ “Agricultural livestock watering (AgL)” means the use of a surface water as a ~~supply of water~~ supply for consumption by livestock.
- ~~6.4.~~ “Annual mean” ~~means is~~ the arithmetic mean of monthly values determined over a consecutive 12-month period, provided that monthly values are determined for at least three months. ~~The A~~ A monthly value is the arithmetic mean of all values determined in a calendar month.
- ~~7.5.~~ “Aquatic and wildlife (cold water) (A&Wc)” means the use of a surface water by ~~animals, plants, or other cold water organisms~~ an animal, plant, or other organism, generally occurring at ~~elevations~~ an elevation greater than 5000 feet, for habitation, growth, or propagation.
- ~~8.6.~~ “Aquatic and wildlife (effluent-dependent water) (A&Wedw)” means the use of an effluent-dependent water by ~~animals, plants, or other organisms~~ an animal, plant, or other organism for habitation, growth, or propagation.
- ~~9.7.~~ “Aquatic and wildlife (ephemeral) (A&We)” means the use of an ephemeral water by ~~animals, plants, or other organisms~~ an animal, plant, or other organism, excluding fish, for habitation, growth, or propagation.
- ~~10.8.~~ “Aquatic and wildlife (warm water) (A&Ww)” means the use of a surface water by ~~animals, plants, or other warm water organisms~~ an animal, plant, or other organism, generally occurring at elevations less than 5000 feet, for habitation, growth, or propagation.
- ~~11.~~ “A&We” means aquatic and wildlife (cold water).
- ~~12.~~ “A&We” means aquatic and wildlife (ephemeral).
- ~~13.~~ “A&Wedw” means aquatic and wildlife (effluent dependent water).
- ~~14.~~ “A&Ww” means aquatic and wildlife (warm water).
- ~~9.~~ “Arizona Pollutant Discharge Elimination System (AZPDES)” means the point source discharge permitting program established under 18 A.A.C. 9, Article 9.
- ~~10.~~ “Assimilative capacity” means the difference between the baseline water quality concentration for a pollutant and the most stringent applicable water quality criterion for that pollutant.
- ~~15.11.~~ “Clean Water Act” means the Federal Water Pollution Control Act [33 U.S.C. 1251 to 1387].

- ~~46-12.~~ “Criteria” means elements of water quality standards that are expressed as pollutant concentrations, levels, or narrative statements representing a water quality that supports a designated use.
13. “Deep lake” means a lake or reservoir with an average depth over 6 meters.
- ~~47-14.~~ “Designated use” means a use specified in Appendix B of this Article for a surface water.
- ~~48-15.~~ “Domestic water source (DWS)” means the use of a surface water as a source of potable water supply. ~~Coagulation, sedimentation, filtration, disinfection, or other treatments~~ Treatment may be necessary to yield a finished water suitable for human consumption.
- ~~19.~~ “DWS” means domestic water source.
- ~~20.~~ “EDW” means effluent dependent water.
- ~~24-16.~~ “Effluent-dependent water (EDW)” means a surface water, classified under R18-11-113, that consists of a point source discharges discharge of treated wastewater ~~that is classified as an effluent dependent water by the Director under R18-11-113~~. An effluent-dependent water is a surface water that, without the point source discharge of ~~treated~~ wastewater, would be an ephemeral water.
- ~~22-17.~~ “Ephemeral water” means a surface water that has a channel that is at all times above the water table, and ~~that~~ flows only in direct response to precipitation.
- ~~23-18.~~ “Existing use” means ~~those uses actually~~ a use attained in the waterbody on or after November 28, 1975, whether or not ~~they are~~ it is included in the water quality standards.
- ~~24.~~ “FBC” means full body contact.”
- ~~25.~~ “FC” means fish consumption.
- ~~26-19.~~ “Fish consumption (FC)” means the use of a surface water by humans for ~~harvesting aquatic organisms for consumption~~ fishing and eating the fish that are caught. ~~Harvestable aquatic organisms include, but are not limited to, fish, clams, turtles, crayfish, and frogs.~~
- ~~27-20.~~ “Full-body contact (FBC)” means the use of a surface water for swimming or other recreational activity that causes the human body to come into direct contact with the water to the point of complete submergence. The use is such that ingestion of the water is likely and sensitive body organs, such as the eyes, ears, or nose, may be exposed to direct contact with the water.
- ~~28-21.~~ “Geometric mean” means the nth root of the product of n items or values. The geometric mean is calculated using the following formula:
- $$GM_y = \sqrt[n]{(Y_1)(Y_2)(Y_3)...(Y_n)}$$
- ~~29-22.~~ “Hardness” means the sum of the calcium and magnesium concentrations, expressed as calcium carbonate (CaCO<sub>3</sub>) in milligrams per liter.
23. “Igneous lake” means a lake located in volcanic or basaltic geology and soils.
- ~~30-24.~~ “Intermittent surface water” means a stream or reach ~~of a stream~~ that flows continuously only at certain times of the year, as when it receives water from a spring or from another surface source, such as melting snow.
- ~~25.~~ “Low flow condition” means the lowest flow over seven consecutive days that has a probability of occurring once in 10 years (7 Q 10).
- ~~34-26.~~ “Mixing zone” means ~~a prescribed an~~ area or volume of a surface water that is contiguous to a point source discharge where ~~initial~~ dilution of the discharge takes place.

- ~~32-27.~~ “National Pollutant Discharge Elimination System (NPDES)” means the point source discharge ~~permit permitting~~ program established by ~~under~~ § 402 of the Clean Water Act [33 U.S.C. 1342].
- ~~33.~~ “Ninetieth percentile” means the value that may not be exceeded by more than 10% of the observations in a consecutive 12 month period. A minimum of 10 samples, each taken at least 10 days apart, are required to determine a ninetieth percentile.
- ~~34.~~ “NNS” means no numeric standard.
- ~~35-28.~~ “Oil” means petroleum in any form, including but not limited to crude oil, gasoline, fuel oil, diesel oil, lubricating oil, or sludge.
- ~~29.~~ “Outstanding Arizona water (OAW)” means a perennial or intermittent water that is free-flowing, has good water quality, and has one or more of the following characteristics:
- ~~a.~~ The water is of exceptional recreational or ecological significance, or
  - ~~b.~~ The existing water quality is essential to the maintenance and propagation of a threatened or endangered species, or
  - ~~c.~~ The water provides critical habitat for a threatened or endangered species.
- ~~36-30.~~ “Partial-body contact (PBC)” means the recreational use of a surface water that may cause the human body to come into direct contact with the water, but normally not to the point of complete submergence (for example, wading or boating). The use is such that ingestion of the water is not likely and sensitive body organs, such as the eyes, ears, or nose, will not normally be exposed to direct contact with the water.
- ~~37.~~ “PBC” means partial body contact.”
- ~~38-31.~~ “Perennial surface water” means a surface water that flows continuously throughout the year.
- ~~39-32.~~ “Pollutant” means ~~fluids, contaminants, toxic wastes, toxic pollutants, a fluid, contaminant, toxic waste, toxic pollutant,~~ dredged spoil, solid waste, ~~substances and chemicals, pesticides, herbicides, fertilizers and other agricultural chemicals~~ pesticide, herbicide, fertilizer and other agricultural chemical, incinerator residue, sewage, garbage, sewage sludge, ~~munitions, petroleum products, chemical wastes, biological materials, radioactive materials~~ munition, petroleum product, chemical waste, biological material, radioactive material, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and mining, industrial, municipal, and agricultural ~~wastes~~ waste, or any other liquid, solid, gaseous, or hazardous substance.
- ~~40-33.~~ “Practical quantitation limit” means the lowest level of quantitative measurement that can be reliably achieved during ~~a routine laboratory operations~~ operation.
- ~~41.~~ “Recreational uses” means the full body contact and partial body contact designated uses.
- ~~42-34.~~ “Regional Administrator” means the Regional Administrator of Region IX of the U.S. Environmental Protection Agency.
- ~~35.~~ “Regulated discharge” means a point source discharge regulated under an AZPDES or NPDES permit, any discharge regulated by a § 404 permit, and any discharge authorized by a federal permit or license that is subject to state water quality certification under § 401 of the Clean Water Act.
- ~~36.~~ “Riffle habitat” means a stream segment where moderate water velocity and substrate roughness produce moderately turbulent conditions that break the surface tension of the water and may produce breaking wavelets that turn the surface water into white water.

37. “Run habitat” means a stream segment where there is moderate water velocity that does not break the surface tension of the water and does not produce breaking wavelets that turn the surface water into white water.
38. “Sedimentary lake” means a lake or reservoir in sedimentary or karst geology and soils.
39. “Shallow lake” means a lake or reservoir, excluding an urban lake, with a smaller, flatter morphology and an average depth of less than 3 meters and a maximum depth of less than 4 meters.
40. “Significant degradation” means the consumption of 20 percent or more of the available assimilative capacity for a pollutant of concern at critical flow conditions.
- 43.41. “Surface water” means a water of the United States and includes the following:
- a. A water that is currently used, was used in the past, or may be susceptible to use in interstate or foreign commerce;
  - b. An interstate water, including an interstate wetland;
  - c. All other waters, such as an intrastate lake, reservoir, natural pond, river, stream (including an intermittent or ephemeral stream), creek, wash, draw, mudflat, sandflat, wetland, slough, backwater, prairie pothole, wet meadow, or playa lake, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce, including any such water:
    - i. That is or could be used by interstate or foreign travelers for recreational or other purposes;
    - ii. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    - iii. That is used or could be used for industrial purposes by industries in interstate or foreign commerce;
  - d. An impoundment of a surface water as defined by this definition;
  - e. A tributary of a surface water identified in subsections (41)(a) through (d) ~~of this definition~~; and
  - f. A wetland adjacent to a surface water identified in subsections (41)(a) through (e) ~~of this definition~~.
- 44.42. “Total nitrogen” means the sum of the concentrations of ammonia (NH<sub>3</sub>), ammonium ion (NH<sub>4</sub><sup>+</sup>), nitrite (NO<sub>2</sub>), and nitrate (NO<sub>3</sub>), and dissolved and particulate organic nitrogen expressed as elemental nitrogen.
- 45.43. “Total phosphorus” means all of the phosphorus present in a sample, regardless of form, as measured by a persulfate digestion procedure.
- 46.44. “Toxic” means a pollutant or combination of pollutants, that after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism, either directly from the environment or indirectly by ingestion through food chains, may cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction), or physical deformations in the organism or its offspring.
47. ~~“Unique water” means a surface water that is classified as an outstanding state resource water by the Director under R18-11-112.~~
45. “Urban Lake” means a small, manmade lake within an urban landscape.

- ~~48.~~46. “Use attainability analysis” means a structured scientific assessment of the factors affecting the attainment of a designated use including physical, chemical, biological, and economic factors.
47. “Wadeable stream” means a stream where the product of the water depth in feet multiplied by the velocity of the water in feet per second is less than nine.
- ~~49.~~48. “Wetland” means an area that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. A wetland includes a swamp, marsh, bog, cienega, tinaja, and similar areas.
- ~~50.~~49. “Zone of passage” means a continuous water route of volume, cross-sectional area, and quality necessary to allow passage of free-swimming or drifting organisms with no acutely toxic effect produced on the organisms.

#### **R18-11-102. Applicability**

- A. The water quality standards prescribed in this Article apply to surface waters.
- B. The water quality standards prescribed in this Article do not apply to the following:
1. A waste treatment system, including an impoundment, pond, lagoon, or constructed wetland that is a part of the waste treatment system;
  2. A man-made surface impoundment and associated ditches and conveyances used in the extraction, beneficiation, or processing of metallic ores that is not a surface water or is located in an area that once was a surface water but no longer remains a surface water because it has been and remains legally converted, including:
    - ~~a.~~ a A pit,
    - ~~b.~~ pregnant Pregnant leach solution pond;
    - ~~c.~~ raffinate Raffinate pond;
    - ~~d.~~ tailing Tailing impoundment;
    - ~~e.~~ decant Decant pond;
    - ~~f.~~ pond Pond or a sump in a mine pit associated with dewatering activity;
    - ~~g.~~ pond Pond holding water that has come into contact with a process or product and that is being held for recycling;
    - ~~h.~~ spill Spill or upset catchment pond; or
    - ~~i.~~ A pond used for onsite remediation, ~~that is not a surface water or is located in an area that once was a surface water but no longer remains a surface water because it has been and remains legally converted~~;
  3. A man-made cooling pond that is neither created originally in a surface water nor results from the impoundment of a surface water; or
  4. A surface water located on tribal lands.

#### **R18-11-107 Antidegradation**

- A. The Director shall determine whether there is degradation of water quality in a surface water on a pollutant-by-pollutant basis, in accordance with A.A.C. R18-11-107 and R18-11-107.01.



- B. Tier 1: ~~The level of~~ water quality necessary to protect an existing ~~uses~~ use shall be maintained ~~and protected~~. No degradation of existing water quality is permitted in a surface water where the existing water quality does not meet the applicable water quality standards.
- C. Tier 2: Where existing water quality in a surface water is better than the applicable water quality standard, the existing water quality shall be maintained and protected. The Director may allow ~~limited~~ degradation of existing water quality in the surface water, provided ~~that the Department holds a public hearing on whether degradation should be allowed under the general public hearing procedures prescribed at R18-1-401 and R18-1-402 and~~ the Director makes all of the following findings:
1. The ~~level of~~ water quality necessary ~~to protect~~ for existing uses is fully protected. ~~Water and water quality shall~~ is not be lowered to a level that does not comply with applicable water quality standards.
  2. The highest statutory and regulatory requirements for new and existing point sources are achieved.
  3. All cost-effective and reasonable best management practices for nonpoint source pollution control are implemented, and
  4. Allowing lower water quality is necessary to accommodate important economic or social development in the area where the surface water is located.
- D. Tier 3: Existing water quality shall be maintained and protected in a surface water that is classified as a unique water an OAW under R18-11-112. ~~The Director shall not allow limited degradation~~ Degradation of a unique water an OAW under subsection (C) is prohibited.
- E. ~~The Department~~ Director shall implement this Section in a manner consistent with § 316 of the Clean Water Act [33 U.S.C. §-1326] if a potential water quality impairment associated with a thermal discharge is involved.

#### **R18-11-107.01 Antidegradation Implementation Procedures**

##### **A. Tier 1 antidegradation protection.**

1. Tier 1 antidegradation protection applies to the following surface waters:
  - a. A surface water listed on the 303(d) list for the pollutant that resulted in the listing,
  - b. An effluent dependent water,
  - c. An ephemeral water,
  - d. An intermittent water, and
  - e. A canal.
2. A regulated discharge shall not violate a water quality standard.
3. A regulated discharge shall not further degrade existing water quality in an impaired water identified on the 303(d) list for the pollutant that resulted in the listing
4. Tier 1 antidegradation review requirements are satisfied for a point source discharge regulated under an AZPDES or NPDES permit to an ephemeral water, effluent dependent water, intermittent water, or a canal provided water quality-based effluent limitations designed to achieve compliance with applicable surface water quality standards are established in the permit and technology-based requirements of the Clean Water Act for the point source discharge are met.

##### **B. Tier 2 antidegradation protection.**

1. Tier 2 antidegradation protection applies to a perennial water with existing water quality that is better

than applicable water quality standards. A perennial water that is not listed in subsection (A)(1) nor classified as an OAW under R18-9-112(G) has Tier 2 antidegradation protection for all pollutants of concern.

2. A regulated discharge that meets the following criteria does not cause significant degradation and satisfies antidegradation requirements:
  - a. The regulated discharge consumes less than 20 percent of the available assimilative capacity for each pollutant of concern, and
  - b. At least 50 percent of the assimilative capacity for each pollutant of concern remains available in the surface water for each pollutant of concern.
3. Antidegradation review. Any person proposing a regulated discharge that causes significant degradation shall provide the Department with the following information:
  - a. Alternative analysis. If the existing water quality of a perennial water will be significantly degraded, the person shall demonstrate that there are no reasonable, cost-effective, less-degrading, or non-degrading alternatives to the regulated discharge.
    - i. The person seeking authorization for the discharge shall prepare and submit a written analysis of alternatives to the discharge. The analysis shall provide information on all reasonable, cost-effective, less-degrading, or non-degrading discharge alternatives. Alternatives may include wastewater treatment process changes or upgrades, pollution prevention measures, source reduction, water reclamation, alternative discharge locations, groundwater recharge, land application or treatment, local pretreatment programs, improved operation and maintenance of existing systems, seasonal or controlled discharge to avoid critical flow conditions, and zero discharge.
    - ii. The alternatives analysis shall include cost information on base pollution control measures associated with the regulated discharge and cost information for each alternative. "Base pollution control measures" are water pollution control measures required to meet technology-based requirements of the Clean Water Act and water quality-based effluent limits designed to achieve compliance with applicable water quality standards.
    - iii. The person shall implement the alternative that is cost effective and reasonable, results in the least degradation, and is approved by the Director. An alternative is cost effective and reasonable if treatment costs associated with the alternative are less than a 10 percent increase above the cost of base pollution control measures;
  - b. Social and economic justification. If the existing water quality of a perennial water is significantly degraded, a person shall demonstrate to the Director that significant degradation is necessary to accommodate important economic or social development in the local area. The person seeking authorization for the discharge shall prepare a written social and economic justification that includes a description of the following:
    - i. The geographic area where significant degradation of existing water quality will occur;
    - ii. The current baseline social and economic conditions in the local area;
    - iii. The net positive social and economic effects of development associated with the

regulated discharge and allowing significant degradation:

iv. The negative social, environmental and economic effects of allowing significant degradation of existing water quality; and

v. Alternatives to the regulated discharge that do not significantly degrade water quality yet may yield comparable social and economic benefits;

c. Baseline characterization. A person seeking authorization to discharge to a perennial water shall provide baseline water quality data on pollutants of concern where no data exist or there are insufficient data to characterize baseline water quality and to determine available assimilative capacity. A discharger shall characterize baseline water quality at a location upstream of the proposed discharge location; and

d. Public participation. The Director shall provide public notice and an opportunity to comment on an antidegradation review and shall provide an opportunity for a public hearing under A.A.C. R18-9-A908(B).

C. Tier 3 antidegradation protection.

1. Tier 3 antidegradation protection applies only to an OAW listed in R18-11-112(G) and to a surface water that is a direct tributary to an OAW.

2. A new or expanded point source discharge directly to an OAW is prohibited.

3. A person seeking authorization for a regulated discharge to a direct tributary to, or upstream of, an OAW shall demonstrate in a permit application or in other documentation submitted to the Department that the regulated discharge will not degrade existing water quality in the downstream OAW.

4. A discharge regulated under a § 404 permit that may affect existing water quality of an OAW requires an individual § 401 water quality certification to ensure that existing water quality is maintained and protected and any water quality impacts are temporary. Temporary water quality impacts are those impacts that occur for a period of six months or less.

D. Antidegradation review of § 404 permits. The Department shall conduct an antidegradation review of a discharge authorized by a § 404 permit issued by the U.S. Army Corps of Engineers as part of the § 401 water quality certification process.

1. A regulated discharge authorized by a § 404 permit that receives § 401 water quality certification from the Department satisfies antidegradation requirements.

2. A discharge regulated under a nationwide or regional § 404 permit that has been certified by the Director under § 401 of the Clean Water Act does not require an individual antidegradation review except as required under subsection (C)(4).

E. Antidegradation review of AZPDES or NPDES stormwater permits. An individual stormwater permit for a municipal separate storm sewer system (MS4) meets antidegradation requirements if the permittee develops and submits to the Director a stormwater management plan containing controls that reduce the level of pollutants in stormwater discharges to the maximum extent practicable, including best management practices, control techniques, prohibitions against illicit discharges, engineering methods and a monitoring program designed to provide information to evaluate the effectiveness of the Stormwater Management Plan.

F. Antidegradation review of a general permit. The Director shall conduct the antidegradation review of a regulated discharge authorized by a general permit at the time the general permit is issued or renewed. A

person seeking authorization to discharge under a general permit issued by the Director is not required to undergo an individual antidegradation review at the time of Notice of Intent submittal unless the discharge may affect an OAW or a water listed on the 303(d) List of impaired waters.

#### **R18-11-108 Narrative Water Quality Standards**

- A. ~~A surface water shall be free from pollutants in amounts or combinations~~ No person shall discharge a pollutant in amounts or combinations that:
1. ~~Settle~~ Settles to form a bottom ~~deposits~~ deposit that ~~inhibit~~ inhibits or ~~prohibit~~ prohibits the habitation, growth, or propagation of aquatic life;
  2. ~~Cause~~ Causes an objectionable odor in the area in which the surface water is located;
  3. ~~Cause~~ Causes an off-taste or odor in drinking water;
  4. ~~Cause~~ Causes an off-flavor in aquatic organisms;
  5. Are toxic to humans, animals, plants, or other organisms;
  6. ~~Cause~~ Causes the growth of algae or aquatic plants that inhibit or prohibit the habitation, growth, or propagation of other aquatic life or that impair recreational uses;
  7. ~~Cause or contribute~~ Causes or contributes to a violation of an aquifer water quality standard prescribed in R18-11-405 or R18-11-406; or
  8. ~~Change~~ Changes the color of the surface water from natural background levels of color.
- B. ~~A surface water shall be free from~~ No person shall discharge oil, grease, and or other pollutants pollutant that ~~float~~ floats as debris, foam, or scum; or that ~~cause~~ causes a film or iridescent appearance on the surface of the water; or that cause a deposit on a shoreline, bank, or aquatic vegetation. The discharge of lubricating oil or gasoline associated with the normal operation of a recreational watercraft is not a violation of this narrative standard.
- C. ~~A discharge of suspended solids to a surface water shall not be~~ No person shall discharge suspended solids to a surface water in quantities or concentrations that ~~either~~ interfere with the treatment processes at the nearest downstream potable water treatment plant or substantially increase the cost of handling solids produced at the nearest downstream potable water treatment plant.
- D. No person shall place refuse, rubbish, demolition or construction debris, trash, garbage, motor vehicles, appliances, tires, or other solid waste into a surface water or onto its banks.

#### **R18-11-108.01 Biological Criteria and Implementation Procedures**

- A. The biological criteria in this Section apply to a wadeable, perennial stream with either an aquatic and wildlife (cold water) or an aquatic and wildlife (warm water) designated use.
- B. A wadeable, perennial stream shall support and maintain a balanced adaptive community of organisms having a taxa riches, species composition, tolerance and functional organization comparable to that of a reference stream in Arizona.
- C. The biological criterion in subsection (B) is met when a bioassessment result, as measured by the Arizona Index of Biological Integrity (IBI) for cold or warm water is:
1. Greater than or equal to the 25th percentile of reference condition, or

2. Greater than the 10th percentile of reference condition and less than the 25th percentile of reference condition and a verification bioassessment result is greater than or equal to the 25th percentile of reference condition.

D. Arizona Index of Biological Integrity (IBI) scores.

<u>Bioassessment Result</u>	<u>Index of Biological Integrity Scores</u>	
	<u>A&amp;Wc</u>	<u>A&amp;Ww</u>
<u>Greater than or equal to the 25th percentile of reference condition</u>	<u>≥ 52</u>	<u>≥ 50</u>
<u>Greater than the 10th and less than the 25th percentile of reference condition</u>	<u>46 - 51</u>	<u>40 - 49</u>

**R18-11-108.02 Narrative Bottom Deposit Standard Implementation Procedures**

- A. The implementation procedures in this Section apply to wadeable, perennial streams with an aquatic and wildlife (cold water) or an aquatic and wildlife (warm water) designated use.
- B. The narrative bottom standard at R18-11-108.01 is met when:
  1. The percentage of fine sediments in the riffle habitats of a wadeable, perennial stream with an A&Wc designated use, as determined by a riffle pebble count, is less than or equal to 30 percent.
  2. The percentage of fine sediments in the riffle and run habitats of a wadeable, perennial stream with an A&Ww designated use, as determined by a reach level pebble count, is equal to or less than 50 percent.

**R18-11-108.03 Narrative Nutrient Standard Implementation Procedures**

- A. The implementation procedures in this Section apply to lakes and reservoirs.
- B. The narrative nutrient standard in R18-11-108(A)(6) is met if sampling conducted during the peak season for lake productivity shows:
  1. The mean chlorophyll-*a* concentration is less than the lower value in the target range chlorophyll-*a* for the lake category; or
  2. The mean chlorophyll-*a* concentration is within the target range for the lake category and:
    - a. The mean blue green algae count is at or below 20,000 per milliliter, and
    - b. The blue green algae count is less than 50 percent of the total algae count, and
    - c. There is no evidence of nutrient-related impairments such as:
      - i. An exceedance of dissolved oxygen or pH standards;
      - ii. A fish kill coincident with a dissolved oxygen or pH exceedance;
      - iii. A fish kill or other aquatic organism mortality coincident with algal toxicity;
      - iv. Secchi depth is less than the lower value prescribed for the lake category;
      - v. A nuisance algal bloom is present in the lacustrine portion of the lake or reservoir; or
      - vi. The concentration of total phosphorous, total nitrogen, or total Kjeldahl nitrogen (TKN) is greater than the upper value in the range prescribed for the lake category;
  3. Submerged aquatic vegetation covers 50 percent or less of the lake bottom of a shallow lake and there is less than a 5 mg/L swing in diel dissolved oxygen concentration measured within the photic zone.
- C. The following threshold ranges apply during the peak season for lake productivity:

1. Warm water lakes peak season, April – October;
  2. Cold water lakes peak season, May – September.
- D. The following table lists the numeric targets for lakes and reservoirs.

NUMERIC TARGETS FOR LAKES AND RESERVOIRS										
Designated Use	Lake Category	Chl- <i>a</i> (ug/L)	Secchi Depth (m)	Total Phosphorus (ug/L)	Total Nitrogen (mg/L)	Total Kjeldal Nitrogen (TKN)	Blue-Green Algae (per ml)	Blue-Green Algae (% of total)	Dissolved Oxygen (mg/L)	pH (SU)
FBC	Deep	10-15	1.5-2.5	70-90	1.2-1.4	1.0-1.1	20,000			6.5-9.0
	Shallow	10-15	1.5-2.0	70-90	1.2-1.4	1.0-1.1				
	Igneous	20-30	0.5-1.0	100-125	1.5-1.7	1.2-1.4				
	Sedimentary	20-30	1.5-2.0	100-125	1.5-1.7	1.2-1.4				
	Urban	20-30	0.5-1.0	100-125	1.5-1.7	1.2-1.4				
A&Wc	All	5-15	1.5-2.0	50-90	1.0-1.4	0.7-1.1		<50	7 (top m)	6.5-9.0
A&Ww	All (except urban lakes)	25-40	0.8-1.0	115-140	1.6-1.8	1.3-1.6			6 (top m)	
	Urban	30-50	0.7-1.0	125-160	1.7-1.9	1.4-1.7			6 (top m)	
A&Wedw	All	30-50	0.7-1.0	125-165	1.7-1.9	1.4-1.7				6.5-6.0
DWS	All	10-20	0.5-1.5	70-100	1.2-1.5	1.0-1.2	20,000			5.0-9.0

#### R18-11-109. Numeric Water Quality Standards

- A. *E. coli* bacteria. The following water quality standards for ~~Escherichia coli (E. coli)~~ *Escherichia coli* (*E. coli*); are expressed in colony forming units per 100 milliliters of water (cfu / 100 ml); or as a Most Probable Number (MPN) shall not be exceeded:

<b>E. coli</b>	<b>FBC</b>	<b>PBC</b>
Geometric mean ( <del>four sample</del> minimum of four samples in 30 days)	126	126
Single sample maximum	235	<del>576</del> 575

- B. pH. The following water quality standards for pH; are expressed in standard units, shall not be violated:

<b>pH</b>	<b>DWS</b>	<b>FBC, PBC, A&amp;W<sup>1</sup></b>	<b>AgI</b>	<b>AgL</b>
Maximum	9.0	9.0	9.0	9.0
Minimum	5.0	6.5	4.5	6.5
Maximum change due to discharge	NNS	0.5	NNS	NNS

- C. The following maximum allowable increase in ambient water temperature, ~~expressed in degrees Celsius, shall not be exceeded~~ due to a thermal discharge is as follows:

<b>Temperature</b>	<b>A&amp;Ww, A&amp;Wedw</b>	<b>A&amp;We</b>
Maximum increase due to a thermal discharge <sup>2,3</sup>	3.0	1.0

A&Ww

3.0° C

A&Wedw

3.0° C

A&Wc

1.0° C

~~D.C.~~ Suspended sediment concentration. The following water quality ~~standard~~ standards for suspended sediment concentration; ~~are~~ expressed as a ~~geometric mean~~ median value (~~four sample minimum~~) determined from a minimum of four-samples collected at least 7 days apart ~~shall not be exceeded.~~ The Director shall not use the results of a suspended sediment concentration sample collected during or within 48 hours after a local storm event to determine the median value. ~~The standard applies to a surface water that is at or near base flow and does not apply to a surface water during or soon after a precipitation event:~~

~~A&Wc, A&Ww~~

80 mg / L

A&WcA&Ww

25 mg/L

80 mg/L

~~E.D.~~ Dissolved oxygen. The following are the water quality standards for dissolved oxygen; ~~expressed in milligrams per liter (mg/L).~~ The dissolved oxygen concentration in a surface water shall not fall below the following minimum concentrations:

1. **Dissolved oxygen**                      A&Ww                      A&Wc  
Single sample minimum <sup>4,2</sup>    6.0 mg/L                      7.0 mg/L
2. **Dissolved oxygen in effluent-dependent waters**  
**(single sample minimum):**                      A&Wedw  
Three hours after sunrise to sunset                      3.0 mg/L  
Sunset to three hours after sunrise                      1.0 mg/L
3. A surface water ~~is in compliance~~ complies with the water quality standard for dissolved oxygen if the percent saturation of dissolved oxygen is equal to or greater than 90% percent.

~~F.E.~~ Nutrient criteria. The following water quality standards for total phosphorus and total nitrogen; ~~are~~ expressed in milligrams per liter (mg/L); ~~shall not be exceeded.~~ A minimum of 10 samples, each taken at least 10 days apart in a consecutive 12-month period, are required to determine a ninetieth percentile. Not more than 10 percent of the samples may exceed the 90th percentile value listed below:

		<b>Annual Mean</b>	<b>90th percentile</b>	<b>Single Sample Maximum</b>
1. Verde River and its tributaries from headwaters to Bartlett Lake:	Total phosphorus	0.10	0.30	1.00
	Total nitrogen	1.00	1.50	3.00
2. Black River, Tonto Creek, and their tributaries that are not located on tribal lands:	Total phosphorus	0.10	0.20	0.80
	Total nitrogen	0.50	1.00	2.00
3. Salt River and its tributaries that are not located on tribal lands but not Pinal Creek above Theodore Roosevelt Lake:	Total phosphorus	0.12	0.30	1.00
	Total nitrogen	0.60	1.20	2.00
4. Theodore Roosevelt, Apache, Canyon, and Saguaro Lakes:	Total phosphorus	0.03 <sup>-5</sup>	NNS	0.60 <sup>-6</sup>
	Total nitrogen	0.30 <sup>-5</sup>	NNS	1.00 <sup>-6</sup>
5. Salt River below Stewart Mountain Dam to confluence with	Total phosphorus	0.05	NNS	0.20

the Verde River:	Total nitrogen	0.60	NNS	3.00
6. Little Colorado River and its tributaries above River Reservoir in Greer, South Fork of Little Colorado River above South Fork Campground, Water Canyon Creek above Apache-Sitgreaves National Forest boundary:	Total phosphorus	0.08	0.10	0.75
	Total nitrogen	0.60	0.75	1.10
7. Little Colorado River at the crossing of Apache County Road No. 124:	Total phosphorus	NNS	NNS	0.75
	Total nitrogen	NNS	NNS	1.80
8. Little Colorado River above Lyman Lake to above the Amity Ditch diversion near crossing of Arizona Highway 273 (applies only when in-stream turbidity is less than 50 NTU):	Total phosphorus	0.20	0.30	0.75
	Total nitrogen	0.70	1.20	1.50
9. Colorado River, at Northern International Boundary near Morelos Dam:	Total phosphorus	NNS	0.33	NNS
	Total nitrogen	NNS	2.50	NNS
10. San Pedro River, from Curtis to Benson:	Total phosphorus	NNS	NNS	NNS
	Total nitrate as N	NNS	NNS	10.00
11. The discharge of wastewater to Show Low Creek and tributaries upstream of and including Fools Hollow Lake shall not exceed 0.16 mg/L total phosphates as P.				
12. The discharge of wastewater to the San Francisco River and tributaries upstream of Luna Lake Dam shall not exceed 1.0 mg/L total phosphates as P.				

<u>Surface Water</u>	<u>Annual Mean</u>	<u>90th Percentile</u>	<u>Single Sample Maximum</u>
1. <u>Verde River and its tributaries from headwaters to Bartlett Lake</u>			
Total phosphorus	0.10	0.30	1.00
Total nitrogen	1.00	1.50	3.00
2. <u>Black River, Tonto Creek, and their tributaries that are not located on tribal lands:</u>			
Total phosphorus	0.10	0.20	0.80
Total nitrogen	0.50	1.00	2.00
3. <u>Salt River and its tributaries that are not located on tribal lands but not Pinal Creek above Theodore Roosevelt Lake</u>			
Total phosphorus	0.12	0.30	1.00
Total nitrogen	0.60	1.20	2.00
4. <u>Salt River below Stewart Mountain Dam to confluence with the Verde River:</u>			
Total phosphorus	0.05		0.20
Total nitrogen	0.60		3.00
5. <u>Little Colorado River and its tributaries above River Reservoir in Greer, South Fork of Little Colorado River above South Fork Campground, Water Canyon</u>			



Creek above Apache-Sitgreaves National Forest boundary:

<u>Total phosphorus</u>	<u>0.08</u>	<u>0.10</u>	<u>0.75</u>
<u>Total nitrogen</u>	<u>0.60</u>	<u>0.75</u>	<u>1.10</u>

6. Little Colorado River at the crossing of Apache County Road No. 124:

<u>Total phosphorus</u>	<u>0.75</u>
<u>Total nitrogen</u>	<u>1.80</u>

7. Little Colorado River above Lyman Lake to above the Amity Ditch diversion near crossing of Arizona Highway 273 (applies only when in-stream turbidity is less than 50 NTU):

<u>Total phosphorus</u>	<u>0.20</u>	<u>0.30</u>	<u>0.75</u>
<u>Total nitrogen</u>	<u>0.70</u>	<u>1.20</u>	<u>1.50</u>

8. Colorado River, at Northern International Boundary near Morelos Dam:

<u>Total phosphorus</u>	<u>0.33</u>
<u>Total nitrogen</u>	<u>2.50</u>

9. Oak Creek from its headwaters at 35°01'30"/111°44'12" to its confluence with the Verde River at 34°40'41"/111°56'30" and the West Fork of Oak Creek from its headwaters at 35°02'44"/111°54'48" to its confluence with Oak Creek at 34°59'14"/111°44'46".

<u>Total phosphorus</u>	<u>1.00</u>	<u>1.50</u>	<u>2.50</u>
<u>Total nitrogen</u>	<u>0.10</u>	<u>0.25</u>	<u>0.30</u>

10. San Pedro River, from Curtis to Benson.

<u>Total nitrate as N</u>	<u>10.00</u>
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11. No discharge of wastewater to Show Low Creek and tributaries upstream of and including Fools Hollow Lake shall exceed 0.16 mg/L total phosphates as P.

12. No discharge of wastewater to the San Francisco River and tributaries upstream of Luna Lake Dam shall exceed 1.0 mg/L total phosphates as P.

~~G. The following water quality standards for radiochemicals shall not be exceeded in surface waters with the domestic water source designated use:~~

- ~~1. The concentration of gross alpha particle activity, including radium 226, but excluding radon and uranium, shall not exceed 15 picocuries per liter of water.~~
- ~~2. The concentration of combined radium 226 and radium 228 shall not exceed five picocuries per liter of water.~~
- ~~3. The concentration of strontium 90 shall not exceed 8 eight picocuries per liter of water.~~
- ~~4. The concentration of tritium shall not exceed 20,000 picocuries per liter of water.~~

- ~~5. The average annual concentration of beta particle activity and photon emitters from manmade radionuclides shall not produce an annual dose equivalent to the total body or any internal organ greater than four millirems per year.~~

Footnotes:

<sup>1</sup> Includes A&Wc, A&Ww, A&Wedw, and A&We.

<sup>2</sup> ~~Does not apply to Cholla Lake.~~

<sup>3</sup> ~~Does not apply to a wastewater treatment plant discharge to a dry watercourse that creates an effluent dependent water or to a stormwater discharge.~~

<sup>42</sup> The dissolved oxygen water quality standard for a lake shall apply below the surface but not at a depth greater than one meter.

<sup>5</sup> ~~Means the annual mean of representative composite samples taken from the surface and at two and five meter depths.~~

<sup>6</sup> ~~Means the maximum for any set of representative composite samples taken from the surface and at two and five meter depths.~~

#### **R18-11-110. Salinity Standards for the Colorado River**

- A. The flow-weighted average annual salinity in the lower main stem of the Colorado River shall ~~be maintained at or below~~ not exceed the following ~~concentrations~~ criteria:

<b>Location</b>	<b>Total Dissolved Solids</b>
Below Hoover Dam	723 mg/L
Below Parker Dam	747 mg/L
At Imperial Dam	879 mg/L

- B. ~~To preserve the basin wide approach to salinity control developed by the Colorado River Basin states and to ensure compliance with the numeric criteria for salinity in subsection (A), the Department adopts the~~ The plan of implementation contained in the “1999 2005 Review, Water Quality Standards for Salinity, Colorado River System,” approved October 2005, Colorado River Basin Salinity Control Forum, 106 West 500 South, Suite 101, Bountiful, Utah 84010-6232 (June, 1999), which is incorporated by reference and on file with the Office of the Secretary of State and the Department is incorporated by reference to preserve the basin-wide approach to salinity control developed by the Colorado River Basin Salinity Control Forum and to ensure compliance with the numeric criteria for salinity in subsection (A). This incorporation by reference contains no future editions or amendments. This material does not include any later amendments or editions of the incorporated material. Copies of the incorporated material are available for inspection at the Arizona Department of Environmental Quality, 1110 W. Washington Street, Phoenix, Arizona 85007 or may be obtained from the Colorado River Basin Salinity Control Forum, 106 West 500 South, Suite 101, Bountiful, Utah 84010-6232.

#### **R18-11-111. Analytical Methods**

- A. A person conducting an analysis of a sample taken to determine compliance with a water quality standard shall use an ~~approved~~ analytical method prescribed in ~~9 A.A.C. 14, Article 6~~ A.A.C. R9-14-610, 40 CFR 136.3, or an alternative analytical method ~~that is approved by the Director of the Arizona Department of Health Services under R9-16-610(B)~~ A.A.C. R9-14-610(B).

- B. A test result from a sample taken to determine compliance with a water quality standard is valid only if the sample is analyzed by a laboratory that is licensed by the Arizona Department of Health Services, an out-of-state laboratory licensed under A.R.S. § 36-495.14, or a laboratory exempted under A.R.S. § 36-495.02, for the analysis performed.

#### **R18-11-112. Unique Outstanding Arizona Waters**

- A. The Director shall classify a surface water as ~~a unique water~~ an outstanding Arizona water (OAW) by rule. ~~The Director shall consider nominations to classify a surface water as a unique water during the triennial review of water quality standards for surface waters.~~
- B. The Director may adopt, ~~by rule under R18-11-115, a site-specific water quality standards~~ standard to maintain and protect existing water quality in ~~a unique water~~ an OAW.
- C. Any person may nominate a surface water for classification as ~~a unique water~~ an OAW by filing a nomination with the ~~Department~~ Director. The nomination ~~to classify a surface water as a unique water~~ shall include:
1. A map and a description of the surface water;
  2. A written statement in support of the nomination, including specific reference to the applicable criteria for ~~unique water~~ an OAW classification prescribed in subsection (D);
  3. Supporting evidence demonstrating that the ~~applicable unique water~~ criteria prescribed in subsection (D) are met; and
  4. Available water quality data relevant to establishing the baseline water quality of the proposed ~~unique water~~ OAW.
- D. The Director may classify a surface water as ~~a unique water upon finding that the surface water is an outstanding state resource water~~ an OAW based upon the following criteria:
1. The surface water is a perennial or intermittent water;
  2. The surface water is in a free-flowing condition. For purposes of this subsection, “in a free-flowing condition” means that a surface water does not have an impoundment, diversion, channelization, rip-rapping or other bank armor, or another hydrological modification within the reach nominated for ~~a unique water~~ an OAW classification;
  3. The surface water has good water quality. For purposes of this subsection, “good water quality” means that the surface water has water quality that meets or ~~exceeds~~ is better than applicable surface water quality standards. A surface water that is listed as impaired under § 303(d) of the Clean Water Act (33 U.S.C. § 1313) is ineligible for ~~unique waters~~ OAW classification; and
  4. The surface water meets one or both of the following conditions:
    - a. The surface water is of exceptional recreational or ecological significance because of its unique attributes, including ~~but not limited to,~~ attributes related to the geology, flora, and fauna, water quality, aesthetic values, or the wilderness characteristics of the surface water;
    - b. ~~Threatened or endangered species are known to be~~ An endangered or threatened species is associated with the surface water and the existing water quality is essential to ~~the~~ its maintenance and propagation ~~of a threatened or endangered species~~ or the surface water provides critical habitat for a threatened or endangered species. ~~Endangered or~~ An endangered or threatened-species are identified in “Endangered and Threatened Wildlife and Plants,” 50

CFR §-17.11 (revised 2005), and § “Endangered and Threatened Plants,” 50 CFR 17.12 (revised as of October 1, 2000 2005), which This material is incorporated by reference and on file with the Department and the Office of the Secretary of State. This incorporation by reference contains no future editions or amendments, and does not include any later amendments or editions of the incorporated material. Copies of the incorporated material are available for inspection at the Arizona Department of Environmental Quality, 1110 W. Washington Street, Phoenix, Arizona 85007 or may be obtained from the National Archives and Records Administration at <http://www.access.gpo.gov/nara/cfr/cfr-table-search.html#page1>.

E. The Director shall hold at least one public meeting in the local area of a surface water that is nominated for classification as an OAW to solicit public comment on the nomination.

F. The Director shall consider the following factors when making a decision whether to classify a surface water as an OAW.

1. Whether there is the ability to manage the surface water and its watershed to maintain and protect existing water quality;
2. The social and economic impact of Tier 3 antidegradation protection;
3. The public comments in support of, or in opposition to, an OAW classification;
4. The timing of the nomination relative to the triennial review of surface water quality standards;
5. The consistency of an OAW classification with applicable water quality management plans; and
6. Whether the nominated surface water is located within a national or state park, national monument, national recreation area, wilderness area, riparian conservation area, area of critical environmental concern, or it has another special use designation (for example, Wild and Scenic River).

E.G. The following surface waters are classified as unique water Outstanding Arizona waters:

1. The West Fork of the Little Colorado River, ~~above~~ from its headwaters at 33°55'02"/109°33'30" to Government Springs at 33°59'33"/109°27'54" (approximately 9.1 river miles);
2. Oak Creek, ~~including the West Fork of Oak Creek~~ from its headwaters at 35°01'30"/111°44'12" to its confluence with the Verde River at 34°40'41"/111°56'30" (approximately 50.3 river miles);
3. West Fork of Oak Creek, from its headwaters at 35°02'44"/111°54'48" to its confluence with Oak Creek at 34°59'14"/111°44'46" (approximately 15.8 river miles);
- ~~3.4. Peoples Canyon Creek, tributary to the Santa Maria River~~ from its headwaters at 34°23'57"/113°19'45" to its confluence with the Santa Maria River at 34°20'36"/113°15'12" (approximately 8.1 river miles);
- ~~4.5. Burro Creek, above its confluence with Boulder Creek~~ from its headwaters at 34°52'46.5"/113°05'13.5" to its confluence with Boulder Creek at 34°37'4.5"/113°18'36" (approximately 29.5 miles);
- ~~5.6. Francis Creek, in Mohave and Yavapai counties~~ from its headwaters at 34°54'38"/113°20'30" to its confluence with Burro Creek at 34°44'29"/113°14'37" (approximately 22.9 river miles);
- ~~6.7. Bonita Creek, tributary to the upper Gila River~~ from its boundary of the San Carlos Indian Reservation at 33°03'08"/109°33'41" to its confluence with the Gila River at 32°53'36"/109°28'43" (approximately 14.7 river miles);

- ~~7-8.~~ Cienega Creek, from its confluence with Gardner Canyon and Spring Water Canyon at R18E-T17S 31°47'38.5"/110°35'21.5" to the USGS gaging station at 32°02'09"/110°40'34", ~~in Pima County~~ (approximately 28.3 river miles);
  - ~~8-9.~~ Aravaipa Creek, from its confluence with Stowe Gulch at 32°52'10"/110°22'03" to the downstream boundary of the Aravaipa Canyon Wilderness Area at 32°54'23"/110°33'42" (approximately 15.5 river miles);
  - ~~9-10.~~ Cave Creek ~~and the South Fork of Cave Creek (Chiricahua Mountains)~~, from the its headwaters at 31°50'30"/109°17'04.5" to the Coronado National Forest boundary at 31°54'38"/109°08'40" (approximately 10.4 river miles);
  11. South Fork of Cave Creek, from its headwaters at 31°50'20"/109°16'33" to its confluence with Cave Creek at 31°53'04"/109°10'30" (approximately 8.6 river miles);
  - ~~10-12.~~ Buehman Canyon Creek, from its headwaters (~~Lat. 32°24'55.5" N, Long. 110°39'43.5" W~~) at 32°52'0.5"/110°39'54.5" to ~~approximately 9.8 miles downstream (Lat. 32°24'31.5" N, Long. 10°32'08" W)~~ its confluence with unnamed tributary at 32°24'31.5"/110°32'08" (approximately 9.8 river miles);
  - ~~11-13.~~ Lee Valley Creek, from its headwaters at 33°55'49"/109°31'34" to its confluence with Lee Valley Reservoir at 33°56'28"/109°30'15.5" (approximately 1.6 river miles);
  - ~~12-14.~~ Bear Wallow Creek, from its headwaters at 33°35'54"/109°26'54.5" to the boundary of the San Carlos Indian Reservation at 33°37'52"/109°29'44" (approximately 4.25 river miles);
  - ~~13-15.~~ North Fork of Bear Wallow Creek, from its headwaters at 33°34'47.5"/109°21'59.5" to its confluence with Bear Wallow Creek at 33°35'54"/109°26'54.5" (approximately 3.8 river miles);
  - ~~14-16.~~ South Fork of Bear Wallow Creek, from its headwaters at 33°34'38.5"/109°23'58" to its confluence with Bear Wallow Creek at 33°35'54"/109°26'54.5" (approximately 3.8 river miles);
  - ~~15-17.~~ Snake Creek, from its headwaters at 33°37'21.5"/109°26'11" to its confluence with the Black River at 33°40'31.5"/109°28'58.5" (approximately 6.2 river miles);
  - ~~17-18.~~ Hay Creek, from its headwaters at 33°51'00"/109°28'48" to its confluence with the West Fork of the Black River at 33°48'30"/109°25'19" (approximately 5.5 river miles);
  - ~~18-19.~~ Stinky Creek, from the ~~Fort~~ White Mountain Apache Indian Reservation boundary at 33°52'36.5"/109°29'45" to its confluence with the West Fork of the Black River at 33°51'21.5"/109°27'09.5" (approximately 3.0 river miles); ~~and~~
  - ~~19-20.~~ KP Creek, from its headwaters at 33°34'03"/109°21'19" to its confluence with the Blue River at 33°31'44"/109°12'04.5" (approximately 12.7 river miles);
  21. Fossil Creek, from its headwaters at the confluence of Sandrock and Calf Pen Canyons above Fossil Springs at 34°26'48.7"/111°32'25" to its confluence with the Verde River at 34°18'21.8"/111°40'31.6" (approximately 17.2 river miles); and
  22. Davidson Canyon, from its headwaters at the unnamed spring at 31°59'00"/110°38'46" to its confluence with Cienega Creek.
- ~~F. The Department shall hold at least one public meeting in the local area of a nominated unique water to solicit public comment on the nomination.~~
- ~~G. The Director may consider the following factors when making a decision whether to classify a nominated surface water as a unique water:~~

1. ~~Whether there is the ability to manage the unique water and its watershed to maintain and protect existing water quality;~~
2. ~~The social and economic impact of Tier 3 antidegradation protection;~~
3. ~~The public comments in support or opposition to a unique waters classification;~~
4. ~~The support or opposition of federal and state land management and natural resources agencies to a nomination;~~
5. ~~Agency resource constraints;~~
6. ~~The timing of the unique water nomination relative to the triennial review of surface water quality standards;~~
7. ~~The consistency of a unique water classification with applicable water quality management plans (for example, § 208 water quality management plans); and~~
8. ~~Whether the nominated surface water is located within a national or state park, national monument, national recreation area, wilderness area, riparian conservation area, area of critical environmental concern, or it has another special use designation (for example, Wild and Scenic River designation).~~

H. The following water quality standards apply to the listed unique waters. Water quality standards prescribed in this subsection supplement the water quality standards prescribed by this Article.

1. The West Fork of the Little Colorado River, above from its headwaters at 33°55'02"/109°33'30" to Government Springs at 33°59'33"/109°27'54" (approximately 9.1 river miles):

Parameter	Standard
pH (standard units)	No change due to discharge
Temperature	No increase due to discharge
Dissolved oxygen	No decrease due to discharge
Total dissolved solids	No increase due to discharge
Chromium (as Cr)(D)	10 µg / L

2. Oak Creek, including from its headwaters at 35°01'30"/111°44'12" to its confluence with the Verde River at 34°40'41"/111°56'30" (approximately 50.3 river miles) and the West Fork of Oak Creek from its headwaters at 35°02'44"/111°54'48" to its confluence with Oak Creek at 34°59'14"/111°44'46" (approximately 15.8 river miles):

Parameter	Standard
pH (standard units)	No change due to discharge
Nitrogen (T)	1.00 mg / L (annual mean) 1.50 mg / L (90th percentile) 2.50 mg / L (single sample max.)
Phosphorus (T)	0.10 mg / L (annual mean) 0.25 mg / L (90th percentile) 0.30 mg / L (single sample max.)
Chromium (as Cr)(D)	5 µg / L
Turbidity change due to discharge	3 NTUs

3. Peoples Canyon Creek, ~~tributary to~~ from its headwaters at 34°23'57"/113°19'45" to its confluence with the Santa Maria River at 34°20'36"/113°15'12" (approximately 8.1 river miles):

Parameter	Standard
Temperature	No increase due to discharge
Dissolved oxygen	No decrease due to discharge
<del>Turbidity change due to discharge</del>	<del>5 NTUs</del>
Arsenic (T)	20 µg / L
Manganese (T)	500 µg / L

4. ~~Burro Creek, above its confluence with Boulder Creek:~~

<del>Parameter</del>	<del>Standard</del>
<del>Manganese (T)</del>	<del>500 µg / L</del>

5. ~~Francis Creek, in Mohave and Yavapai counties:~~

<del>Parameter</del>	<del>Standard</del>
<del>Manganese (T)</del>	<del>500 µg / L</del>

64. Cienega Creek, from its confluence with Gardner Canyon and Spring Water Canyon at R18E T17S to Del Lago Dam, in Pima County at 31°47'38.5"/110°35'21.5" to the USGS gaging station at 32°02'09"/110°40'36" (approximately 28.3 river miles):

Parameter	Standard
pH	No change due to discharge
Temperature	No increase due to discharge
Dissolved oxygen	No decrease due to discharge
Total dissolved solids	No increase due to discharge
<del>Turbidity</del>	<del>10 NTUs</del>

75. Bonita Creek, ~~tributary to the Upper~~ from the boundary of the San Carlos Indian Reservation at 33°03'08"/109°33'41" to its confluence with the Gila River at 32°53'36"/109°28'43" (approximately 14.7 river miles):

Parameter	Standard
pH	No change due to discharge
Temperature	No increase due to discharge
Dissolved oxygen	No decrease due to discharge
Total dissolved solids	No increase due to discharge
<del>Turbidity</del>	<del>15 NTUs</del>

Abbreviations:

~~"(D)" means dissolved fraction~~

~~"(T)" means total recoverable~~

~~"NTUs" means nephelometric turbidity units~~

~~"mg / L" means milligrams per liter~~

~~"µg / L" means micrograms per liter~~

**R18-11-113. ~~Effluent-dependent~~ Effluent-Dependent Waters**

- A. The Director shall classify a surface water as an effluent-dependent water by rule.
- B. The Director may adopt, by rule, site-specific water quality standards for an effluent-dependent water.
- C. Any person may submit a petition for rule adoption requesting that the Director classify a surface water as an effluent-dependent water. The petition ~~for rule adoption~~ shall include:
  - 1. A map and a description of the surface water,
  - 2. Information that demonstrates that the surface water consists of ~~discharges of treated wastewater at a point source discharge of wastewater,~~ and
  - 3. Information that demonstrates that, without a point source discharge of a wastewater, the receiving water is an ephemeral water ~~in the absence of the discharge of treated wastewater.~~
- ~~D. The following surface waters are classified as effluent dependent waters:~~
  - ~~1. In the Colorado River Main Stem Basin:~~
    - ~~a. Bright Angel Wash from the South Rim Grand Canyon WWTP outfall to its confluence with Coconino Wash,~~
    - ~~b. Cataract Creek from the Williams WWTP outfall to one kilometer downstream from the outfall,~~
    - ~~c. Holy Moses Wash from the Kingman WWTP outfall to three kilometers downstream from the outfall, and~~
    - ~~d. Transept Canyon from the North Rim Grand Canyon WWTP outfall to one kilometer downstream from the outfall.~~
  - ~~2. In the Little Colorado River Basin:~~
    - ~~a. Dry Lake,~~
    - ~~b. Lake Humphreys,~~
    - ~~c. Lower Walnut Canyon Lake,~~
    - ~~d. Ned Lake,~~
    - ~~e. Pintail Lake,~~
    - ~~f. Telephone Lake,~~
    - ~~g. Rio de Flag from the City of Flagstaff WWTP outfall to its confluence with San Francisco Wash, and~~
    - ~~h. Whale Lake.~~
  - ~~3. In the Middle Gila River Basin:~~
    - ~~a. Unnamed wash from the Town of Prescott Valley WWTP outfall to its confluence with the Agua Fria River, and the Agua Fria River below its confluence with the unnamed wash receiving treated wastewater from the Prescott Valley WWTP to State Route 169;~~
    - ~~b. Agua Fria river from the El Mirage WWTP outfall to two kilometers downstream from the outfall;~~
    - ~~c. Gila River from the Florence WWTP outfall to Felix Road,~~
    - ~~d. Gila River from its confluence with the Salt River to Gillespie Dam;~~
    - ~~e. Queen Creek from the Town of Superior WWTP outfall to its confluence with Potts Canyon;~~
    - ~~f. Unnamed wash from the Gila Bend WWTP outfall to its confluence with the Gila River;~~



- g. ~~Unnamed wash from the Luke AFB WWTP outfall to its confluence with the Agua Fria River; and~~
  - h. ~~Unnamed wash from the Queen Valley WWTP outfall to its confluence with Queen Creek.~~
  - 4. ~~In the Rios de Mexico Basin:~~
    - a. ~~Mule Gulch, from the Bisbee WWTP outfall to the Highway 80 bridge, and~~
    - b. ~~Unnamed wash from the Bisbee Douglas International Airport WWTP outfall to Whitewater Draw.~~
  - 5. ~~In the Salt River Basin:~~
    - a. ~~Unnamed wash from the Globe WWTP outfall to its confluence with Pinal Creek and Pinal Creek from its confluence with the unnamed wash to Radium, and~~
    - b. ~~Salt River from the 23rd Avenue WWTP outfall to its confluence with the Gila River.~~
  - 6. ~~In the San Pedro River Basin:~~
    - a. ~~Unnamed wash from the Mt. Lemmon WWTP outfall to 0.25 kilometers downstream, and~~
    - b. ~~Walnut Gulch from the Tombstone WWTP outfall to its confluence with Tombstone Gulch.~~
  - 7. ~~In the Santa Cruz Basin:~~
    - a. ~~Santa Cruz River from the Nogales International WWTP outfall to Tubac Bridge,~~
    - b. ~~Santa Cruz River from the Roger Road WWTP outfall to Baumgartner Road crossing,~~
    - c. ~~Unnamed wash from the Oracle WWTP outfall to five kilometers downstream, and~~
    - d. ~~Sonoita Creek from the Town of Patagonia WWTP outfall to 750 feet downstream.~~
  - 8. ~~In the Upper Gila River Basin:~~
    - a. ~~Bennett Wash from the Arizona Department of Corrections Safford WWTP outfall to the Gila River, and~~
    - b. ~~Unnamed wash from the Arizona Department of Corrections Globe WWTP outfall to the boundary of the San Carlos Indian Reservation.~~
  - 9. ~~In the Verde River Basin:~~
    - a. ~~American Gulch from the Northern Gila County Sanitary District WWTP outfall to the East Verde River,~~
    - b. ~~Bitter Creek from the Jerome WWTP outfall to 2.5 kilometers downstream from the outfall, and~~
    - c. ~~Jacks Canyon Wash from the Big Park WWTP outfall to its confluence with Dry Beaver Creek.~~
  - 10. ~~In the Willecox Playa Basin: Lake Cochise~~
- E.D. The Director or the NPDES permit issuing permitting authority shall use the water quality standards that apply to an effluent-dependent water to derive ~~discharge limitations~~ water quality-based effluent limits for a point source discharge ~~from a wastewater treatment plant of wastewater~~ to an ephemeral water ~~that changes that ephemeral water into an effluent dependent water.~~ The Director or the NPDES permitting authority shall use acute and chronic aquatic and wildlife (effluent-dependent water) standards to derive water quality-based effluent limits in an AZPDES or NPDES permit authorizing any of the following:
- 1. A continuous discharge of wastewater to an ephemeral water;
  - 2. An intermittent discharge of wastewater to an ephemeral water on seven or more consecutive days,

3. An intermittent discharge of wastewater to an ephemeral water for less than seven consecutive days, with less than 30 days between discharge events.
  4. A discharge to an ephemeral water that may reach a downstream surface water listed in Appendix B with aquatic and wildlife chronic standards, and
  5. A discharge to an impoundment located within an ephemeral water.
- E. The Director or the NPDES permitting authority may use aquatic and wildlife (edw) acute standards to derive water quality based effluent limits for a sporadic, infrequent, or emergency point source discharge to an ephemeral water or to an effluent-dependent water provided the discharge does not meet any of the conditions listed in subsections (D)(1) through (5).
- F. The Director or the NPDES permitting authority may establish alternative water quality-based effluent limits in an AZPDES or NPDES permit based on a seasonal differences in the discharge.
- ~~F. The site specific standard of 36 µg / L for dissolved copper for the aquatic and wildlife (effluent dependent water) designated use applies to the Rio de Flag from the City of Flagstaff WWTP outfall to its confluence with the San Francisco Wash.~~

#### **R18-11-114. Mixing Zones**

- A. The Director or the NPDES permitting authority may establish a mixing zone for a point source discharge to a surface water as a condition of a NPDES an AZPDES or NPDES permit. ~~Mixing zones are~~ A mixing zone is prohibited in an ephemeral waters water or where there is no water for dilution.
- B. The owner or operator of a point source seeking the establishment of a mixing zone shall submit a ~~mixing zone application to the Department on a standard form that is available from the Department~~ request for a mixing zone as part of an application for an AZPDES or NPDES permit. The ~~application~~ request shall include:
1. ~~Identification~~ An identification of the pollutant for which the mixing zone is requested;
  2. A proposed outfall design;
  3. A definition of the boundary of the proposed mixing zone. For purposes of this subsection, the boundary of a mixing zone means the location where the concentration of treated wastewater across a transect of the surface water differs by less than 5% percent; and
  4. A complete and detailed description of the existing physical, biological, and chemical conditions of the receiving water and the predicted impact of the proposed mixing zone on those conditions.
- C. The ~~Department~~ Director shall review the ~~application~~ request for a mixing zone to determine whether the ~~application~~ written request is complete. If the ~~application~~ request is incomplete, the Department shall ~~identify in writing~~ provide the applicant with a list of the additional information required ~~that must be submitted to the Department to complete the mixing zone application.~~
- D. The Director shall consider the following factors when deciding whether to grant or deny a request for a mixing zone:
1. The assimilative capacity of the receiving water;
  2. The likelihood of adverse human health effects;
  3. The location of drinking water plant intakes and public swimming areas;
  4. The predicted exposure of biota and the likelihood that resident biota will be adversely affected;
  5. Bioaccumulation ~~and bioconcentration~~;

6. Whether there will be acute toxicity in the mixing zone, and, if so, the size of the ~~area of acute toxicity zone~~ zone of initial dilution;
  7. The known or predicted safe exposure levels for the pollutant of concern;
  8. The size of the mixing zone;
  9. The location of the mixing zone relative to biologically sensitive areas in the surface water;
  10. The concentration gradient of the pollutant within the mixing zone;
  11. Sediment deposition;
  12. The potential for attracting aquatic life to the mixing zone; and
  13. The cumulative impacts of other mixing zones and other discharges to the surface water.
- E. Director determination.
1. The Director shall deny ~~the a~~ request to establish a mixing zone if a water quality standards standard will be violated outside the boundaries of the proposed mixing zone ~~will be violated~~. The Director shall notify the owner or operator of the denial of a request for a mixing zone shall be in writing and shall state the reason for the denial.
  2. If the Director ~~determines that~~ approves the request to establish a mixing zone ~~should be established~~, the Director shall establish the mixing zone as a condition of a ~~NPDES~~ an AZPDES or NPDES permit. The Director ~~may~~ shall include any mixing zone ~~conditions~~ condition in the AZPDES or NPDES permit that the Director deems necessary to protect human health and the designated uses of the surface water.
- F. Any person who is adversely affected by the Director's decision to grant or deny a request for a mixing zone may appeal the decision ~~to an administrative law judge~~ under A.R.S. § 49-321 and A.R.S. § 41-1092 et seq.
- G. ~~The Department~~ Director shall reevaluate a mixing zone upon issuance, reissuance, or modification of the ~~National Pollutant Discharge Elimination System~~ AZPDES or NPDES permit for the point source or a modification of the outfall structure.
- ~~H. The length of a mixing zone shall not exceed 500 meters in a stream. The total horizontal area allocated to all mixing zones on a lake shall not exceed 10% of the surface area of the lake. Adjacent mixing zones in a lake shall be no closer than the greatest horizontal dimension of any individual mixing zone.~~
- ~~I. A mixing zone shall provide for a zone of passage of not less than 50% of the cross sectional area of a river or stream.~~
- ~~J. The discharge outfall shall be designed to maximize initial dilution of the treated wastewater in a surface water.~~
- H. Mixing zones requirements.
1. The length of a mixing zone shall not exceed 500 meters in a stream.
  2. The total horizontal area allocated to all mixing zones on a lake shall not exceed 10 percent of the surface area of the lake.
  3. Adjacent mixing zones in a lake shall not overlap or be located closer together than the greatest horizontal dimension of the largest mixing zone.
  4. A mixing zone shall provide for a zone of passage of not less than 50 percent of the cross-sectional area of a river or stream.
  5. The design of any discharge outfall shall maximize initial dilution of the treated wastewater in a surface water.

6. The size of the zone of initial dilution in a mixing zone shall prevent lethality to drifting organisms passing through the zone of initial dilution.
- K. A mixing zone is prohibited The Director shall not establish a mixing zone in an AZPDES or NPDES for the following persistent, bioaccumulative pollutants:
1. Chlordane,
  2. DDT and its metabolites (DDD and DDE),
  3. Dieldrin,
  4. Dioxin,
  5. Endrin,
  6. Endrin aldehyde,
  7. Heptachlor,
  8. Heptachlor epoxide,
  9. Lindane,
  10. Mercury,
  11. Polychlorinated biphenyls (PCBs), and
  12. Toxaphene.

#### **R18-11-115. Site-Specific Standards**

- A. The Director shall adopt a site-specific standard by rule. Site-specific standards are listed in Appendix C.
- B. The Director may adopt a site-specific standard for any of the following reasons:
1. Local physical, chemical, or hydrological conditions of a surface water such as pH, hardness, or temperature alters the biological availability or toxicity of a pollutant;
  2. The sensitivity of resident aquatic organisms that occur in a surface water to a pollutant differs from the sensitivity of the species used to derive the numeric water quality standards to protect aquatic life in Appendix A;
  3. Resident aquatic organisms that occur in a surface water represent a narrower mix of species than those in the dataset used by the Department to derive numeric water quality standards to protect aquatic life in Appendix A; or
  4. The natural background concentration of a pollutant is greater than the numeric water quality standard to protect aquatic life prescribed in Appendix A.
- C. Site-specific study. A person shall conduct a site-specific study to support the development of a site-specific standard using the applicable procedure listed in subsections (D)(1) through (4):
1. The Recalculation Procedure, Appendix L, pages 90 - 98, Water Quality Standards Handbook, Second Edition, EPA 823-B-94-005b, August 1994. This material is incorporated by reference and does not include any later amendments or editions of the incorporated material. A copy of the incorporated material is available for inspection at the Arizona Department of Environmental Quality, 1110 W. Washington, Phoenix, Arizona 85007 or: may be obtained from the U.S. Environmental Protection Agency, Office of Water at <http://www.epa.gov/waterscience/standards/handbook/handbookappxL.pdf>.
  2. Water-Effects Ratio for Metals, Appendix L, pages 1 - 89, Water Quality Standards Handbook, Second Edition, EPA 823-B-94-005b, August 1994. This material is incorporated by reference and

does not include any later amendments or editions of the incorporated material. A copy of the incorporated material is available for inspection at the Arizona Department of Environmental Quality, 1110 W. Washington, Phoenix, Arizona 85007 or: may be obtained from the U.S. Environmental Protection Agency, Office of Water at <http://www.epa.gov/waterscience/standards/handbook/handbookappxL.pdf>.

3. Streamlined Water Effects Ratio Procedure for Discharges of Copper, EPA-822-R-01-005, March 2001. This material is incorporated by reference and does not include any later amendments or editions of the incorporated material. A copy of the incorporated material is available for inspection at the Arizona Department of Environmental Quality, 1110 W. Washington, Phoenix, Arizona 85007 or: may be obtained from the U.S. Environmental Protection Agency, Office of Water at <http://www.epa.gov/ost/criteria/copper/copper.pdf>.
4. Natural background.
  - a. A person seeking to develop a site-specific standard based on natural background shall provide a study outline to the Director and obtain approval before conducting the study.
    - i. The person may use statistical or modeling approaches to determine natural background concentration.
    - ii. Modeling approaches include Better Assessment Science Integrating Source and Nonpoint Sources (Basins), Hydrologic simulation Program-Fortran (HSPF), and Hydrologic Engineering Center (HEC) programs developed by the U.S. Army Corps of Engineers.
  - b. The Director may establish a site-specific standard at a concentration equal to the natural background concentration.
  - c. For purposes of this subsection, “natural background” means the concentration of a pollutant in a surface water due only to non-anthropogenic sources.

#### **R18-11-116. Resource ~~management agencies~~ Management Agencies**

Nothing in this Article ~~shall be construed to prohibit~~ prohibits fisheries management activities by the Arizona Game and Fish Department or the U.S. Fish and Wildlife Service. This ~~provision~~ Article does not exempt fish hatcheries from ~~National Pollutant Discharge Elimination System~~ AZPDES or NPDES permit requirements.

#### **R18-11-117. Canals and Municipal Park Lakes**

- A. Nothing in this Article shall be construed to prevent ~~prevents~~ the routine physical or mechanical maintenance of canals, drains, and the municipal park lakes identified in Appendix B. Physical or mechanical maintenance includes dewatering, lining, dredging, and the physical, biological, or chemical control of weeds and algae. ~~Increases in turbidity that result from physical or mechanical maintenance activities are permitted in canals, drains, and the municipal park lakes identified in Appendix B.~~
- B. The discharge of lubricating oil that is associated with the start-up of well pumps ~~which~~ that discharge to canals is not a violation of R18-11-108(B).

#### **R18-11-118. Dams and Flood Control Structures**

- A. ~~Increases in turbidity that result from the routine physical or mechanical maintenance of a dam or flood control structure are not violations of this Article.~~
- B. Nothing in this Article ~~shall be construed to require~~ requires the release of water from a dam or a flood control structure.

#### **R18-11-121. Schedules of Compliance**

- A. ~~A The Director or the NPDES permitting authority may establish a schedule to bring an existing point source into compliance with a new or revised water quality standard may be established in a National Pollutant Discharge Elimination System~~ an AZPDES or NPDES permit for an existing point source. A compliance schedule in an AZPDES or NPDES permit for an existing point source, other than a ~~storm water~~ stormwater discharge, shall require ~~compliance~~ the permittee to comply with a discharge limitation based upon a new or revised water quality standard no later than three years after the effective date of the ~~National Pollutant Discharge Elimination System~~ AZPDES or NPDES permit. ~~For a schedule of compliance to be granted, the owner or operator of the existing point source~~ The permittee shall demonstrate that all requirements under § 301(b) and § 306 of the Clean Water Act [33 U.S.C. § 1311(b) and § 1316] ~~have been~~ are achieved and that the point source cannot comply with a discharge limitation based upon the new or revised water quality standard through the application of existing water pollution control technology, operational changes, or source reduction.
- B. ~~A The Director or NPDES permitting authority may establish a schedule of compliance may be established in a National Pollutant Discharge Elimination System~~ an AZPDES or NPDES permit for a new point source. The first ~~National Pollutant Discharge Elimination System~~ AZPDES or NPDES permit issued to a new point source may contain a schedule of compliance only when necessary to allow ~~a reasonable opportunity~~ the permittee to attain compliance with a new or revised water quality standard that becomes effective after commencement of construction but less than three years before ~~commencement of the discharge~~ begins. For purposes of this subsection, “commencement of construction” means that the owner or operator of the point source has obtained the federal, state, and local approvals or permits necessary to begin physical construction of the point source and either:
1. Onsite physical construction has begun; or
  2. The owner or operator has entered into a contract for physical construction of the point source and the contract cannot be cancelled or modified without substantial loss. For purposes of this subsection, “substantial loss” means in excess of 10% percent of the total cost incurred for physical construction.
- C. ~~A The Director or NPDES permitting authority may establish a schedule of compliance may be established in a National Pollutant Discharge Elimination System~~ an AZPDES or NPDES permit for a recommencing point source discharge. The first ~~National Pollutant Discharge Elimination System~~ AZPDES or NPDES permit issued to a recommencing point source ~~discharge~~ discharger may contain a schedule of compliance only when necessary ~~to allow a reasonable opportunity~~ to attain compliance with a new or revised water quality standard that ~~becomes~~ is effective less than three years before recommencement of the discharge.
- D. ~~A The Director or NPDES permitting authority may establish a schedule to bring a point source discharge of storm water~~ stormwater into compliance with a water quality standard ~~may be established in a National Pollutant Discharge Elimination System~~ an AZPDES or NPDES permit. A compliance schedule for a ~~storm~~

~~water~~ stormwater discharge shall require implementation of all reasonable and cost-effective best management practices to control the discharge of pollutants in ~~storm-water~~ stormwater.

#### **R18-11-122. Variances**

- A. The Director ~~may grant~~ shall consider a variance from a water quality standard for a point source discharge if the discharger demonstrates that treatment more advanced than that required to comply with technology-based effluent limitations is necessary to comply with the water quality standard and:
1. It is not technically feasible to achieve compliance within the next five years,
  2. The cost of the treatment would result in substantial and widespread economic and social impact, or
  3. Human-caused conditions or sources of pollution prevent attainment of the water quality standard and cannot be remedied within the next five years.
- ~~B. A variance may be granted only on a pollutant specific basis. A point source discharge is required to comply with all other applicable water quality standards for which a variance is not granted.~~
- ~~C. A variance applies only to a specific point source discharge. The granting of a variance does not modify a water quality standard. Other point source dischargers to the surface water shall comply with applicable water quality standards, including any water quality standard for which a variance has been granted for a specific point source discharge.~~
- B. If the Director grants a variance for a point source discharge:
1. The Director shall issue the variance for a fixed term not to exceed five years.
  2. The variance shall apply only on a pollutant-specific basis. The point source discharge shall meet all other applicable water quality standards for which a variance is not granted, and
  3. The variance shall not modify a water quality standard. Other point source discharges to the surface water shall meet applicable water quality standards.
- ~~D.C. A variance is for a fixed term not to exceed five years.~~ Upon expiration of a variance, a point source discharger shall either comply with the water quality standard or apply for renewal of the variance. To renew a variance, the applicant shall demonstrate reasonable progress towards compliance with the water quality standard during the term of the variance.
- ~~E.D.~~ The ~~Department~~ Director shall reevaluate a variance upon the issuance, reissuance, or modification of the ~~National Pollutant Discharge Elimination System~~ AZPDES or NPDES permit for the point source discharge.
- ~~F.E.~~ A person who seeks a variance from a water quality standard shall submit a written request for a variance to the ~~Department~~ Director. A request for a variance shall include the following information:
1. Identification of the specific pollutant and water quality standard for which a variance is sought;
  2. Identification of the receiving surface water;
  3. For an existing point source discharge, a detailed description of the existing discharge control technologies that are used to achieve compliance with applicable water quality standards. For a new point source discharge, a detailed description of the proposed discharge control technologies that will be used to achieve compliance with applicable water quality standards;
  4. Documentation that the existing or proposed discharge control technologies will comply with applicable technology-based effluent limitations and that more advanced treatment technology is necessary to achieve compliance with the water quality standard for which a variance is sought;

5. A detailed discussion of the reasons why compliance with the water quality standard cannot be achieved;
6. A detailed discussion of the discharge control technologies that are available for achieving compliance with the water quality standard for which a variance is sought;
7. Documentation of one of the following:
  - a. That it is not technically feasible to install and operate any of the available discharge control technologies to achieve compliance with the water quality standard for which a variance is sought,
  - b. That installation and operation of each of the available discharge technologies to achieve compliance with the water quality standard would result in substantial and widespread economic and social impact, or
  - c. That human-caused conditions or sources of pollution prevent the attainment of the water quality standard for which the variance is sought and it is not possible to remedy the conditions or sources of pollution within the next five years;
8. Documentation that the point source discharger has reduced, to the maximum extent practicable, the discharge of the pollutant for which a variance is sought through implementation of a local pretreatment, source reduction, or waste minimization program; and
9. A detailed description of proposed interim discharge limitations that represent the highest level of treatment achievable by the point source discharger during the term of the variance. ~~Interim discharge limitations shall not be less stringent than technology based effluent limitations.~~

~~G.F.~~ ~~In making a decision on whether to grant or deny the request for a variance, the~~ The Director shall consider the following factors when deciding whether to grant or deny the request for a variance:

1. ~~Bioaccumulation and bioconcentration,~~
2. The predicted exposure of biota and the likelihood that resident biota will be adversely affected,
3. The known or predicted safe exposure levels for the pollutant of concern, and
4. The likelihood of adverse human health effects.

~~H.G.~~ ~~The Department~~ Director shall issue a public notice and ~~shall~~ provide an opportunity for a public hearing on whether the request for a variance should be granted or denied under ~~procedures prescribed in R18-1-401 and R18-1-402~~ A.A.C. R18-9-A907 and A.A.C. R18-9-A908. An interested party may request a public hearing on a variance under A.A.C. R18-9-A908(B).

H. Any variance considered for adoption by the Director is subject to review and approval by the Regional Administrator.

I. Any person who is adversely affected by a decision of the Director to grant or deny a variance may appeal the decision ~~to an administrative law judge~~ under A.R.S. § 49-321 and A.R.S. § 41-1092 et seq.

J. ~~The Department~~ Director shall not grant a variance for a point source discharge to ~~a unique water~~ an OAW listed in R18-11-112(G).

~~K.~~ ~~A variance is subject to review and approval by the Regional Administrator of the U.S. Environmental Protection Agency.~~



**R18-11-123. ~~Prohibition Against Discharge~~ Prohibitions**

- A. The discharge of ~~treated~~ wastewater to ~~Sabino Creek~~ is the following sites is prohibited:-
1. Sabino Canyon;
  2. Vekol Wash, upstream of the Ak-Chin Indian Reservation;
  3. Smith Wash, upstream of the Ak-Chin Indian Reservation;
  4. Santa Rosa Wash, from its confluence with Greene Wash to the Ak-Chin Indian Reservation; and
  5. Santa Cruz Wash, from its confluence with the North Branch of the Santa Cruz Wash to the Ak Chin Indian Reservation.
- B. The discharge of human body wastes and the wastes from toilets and other receptacles intended to receive or retain those wastes on a vessel to Lake Powell is prohibited.